

POTASSIUM SORBATE – SAFETY DATA SHEET

SECTION 1 IDENTIFICATION OF THE SUBSTANCE / MIXTURE AND OF THE COMPANY / UNDERTAKING

PRODUCT IDENTIFIER

SYNONYMS	Sorbic acid, potassium salt; Potassium (E,E)-hexa-2,4-dienoate; 2,4-Hexadienoic acid, potassium salt (1:1), (2E,4E)
Uses	A preservative inhibiting the growth of yeasts, moulds and some bacteria in a wide range of food, beverage, pharmaceutical and cosmetic products.

DETAILS OF THE SUPPLIER OF THE SAFETY DATA SHEET

Registered distributor company name	Pure Ingredients Ltd
Address	626A Rosebank Road, Avondale, Auckland 1026 New Zealand
Telephone	+649 8135619
Website	www.pureingredients.co.nz
Email	compliance@pureingredients.co.nz


EMERGENCY TELEPHONE NUMBER

CHEMCALL	0800 CHEMCALL / 800 243 622 (24hr)
Emergency telephone numbers	111
Other emergency telephone numbers	NZ Poisons Centre 0800 POISON (0800 764 766)

SECTION 2 HAZARDS IDENTIFICATION

HSNO Classifications:

Considered a Hazardous Substance according to the criteria of the New Zealand Hazardous Substances and New Organisms Legislation.

Hazard Labelling WARNING	
HSNO 6.4A	GHS EQUIVALENT Serious eye irritation - Category 2
PREVENTION:	Wash hands and exposed skin thoroughly after handling. Wear protective gloves/protective clothing/eye protection/face protection.
RESPONSE:	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical advice/attention.
DISPOSAL	Dispose of contents and packaging in accordance with relevant legislation. See Section 13 of this SDS Document for more information.

SECTION 3 COMPOSITION / INFORMATION ON INGREDIENTS

Name	Potassium Sorbate	Hazardous	Yes
CAS No	590-00-1 / 24634-61-5	Proportion %	100

SECTION 4 FIRST AID MEASURES

NZ Poisons Centre 0800 POISON (0800 764 766) | NZ Emergency Services: 111

SWALLOWED: DO NOT induce vomiting. Give water to rinse out mouth, then provide liquid slowly and as much as casualty can comfortably drink. First aid is not generally required. If in doubt, contact a Poison Centre or a doctor. If vomiting occurs, lean patient forward or place on left side (head-down position, if possible) to maintain open airway and prevent aspiration. Seek medical advice.

EYE: If this product comes in contact with eyes, wash out immediately with water. If irritation continues, seek medical attention. Removal of contact lenses after an eye injury should only be undertaken by skilled personnel. **SKIN:** If skin contact occurs, immediately remove all contaminated clothing, including footwear. Flush skin and hair with running water (and soap if available). Seek medical attention in event of irritation. Open cuts, abraded or irritated skin should not be exposed to this material.

INHALED: If dust is inhaled, remove from contaminated area. Encourage patient to blow nose to ensure clear passage of breathing. If irritation or discomfort persists seek medical attention.

NOTES TO PHYSICIAN: Treat symptomatically based on individual reactions of patient and judgement of doctor.

NOTE: In an emergency dial 111, for advice contact a Poison Centre (0800-764-766).

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SECTION 5 FIREFIGHTING MEASURES

Extinguishing Media	In case of fire, use appropriate extinguishing media most suitable for surrounding fire conditions: water, water spray, dry powder, foam, carbon dioxide (CO ₂). DO NOT use water jet as it may spread the fire.
Fire Fighting	Alert Fire Brigade and tell them location and nature of hazard. Use standard procedure for chemical fires. Clear fire area of all non-emergency personnel. Stay upwind. Eliminate ignition sources. Prevent spillage from entering drains or watercourses. Use water delivered as a fine spray to control fire and cool adjacent area. DO NOT approach containers suspected to be hot. Cool fire exposed containers with water spray from a protected location. If safe to do so, remove containers from path of fire. Equipment should be thoroughly decontaminated after use.
Fire and Explosion Hazard	Combustible solid which burns but propagates flame with difficulty. Avoid generating dust, particularly clouds of dust in a confined or unventilated space as dusts may form an explosive mixture with air, and any source of ignition, i.e. flame or spark, will cause fire or explosion. Dust clouds generated by the fine grinding of the solid are a particular hazard; accumulations of fine dust may burn rapidly and fiercely if ignited. Dry dust can also be charged electrostatically by turbulence, pneumatic transport, pouring, in exhaust ducts and during transport. Build-up of electrostatic charge may be prevented by bonding and grounding. Powder handling equipment such as dust collectors, dryers and mills may require additional protection measures such as explosion venting. All movable parts coming in contact with this material should have a speed of less than 1-meter/sec. Combustion products include: carbon monoxide (CO), carbon dioxide (CO ₂), potassium oxides.
Fire Incompatibility	Avoid mixing with strong oxidisers.
Personal Protective	Firefighters should wear a positive-pressure self-contained breathing apparatus (SCBA) and protective firefighting clothing (includes firefighting helmet, coat, trousers, boots and gloves).

SECTION 6 ACCIDENTAL RELEASE MEASURES

Minor Spills	Clean up all spills immediately. Stop spill if safe to do so. Avoid contact with skin and eyes. Avoid generating dust. Pick up and transfer to properly labelled containers for disposal. After cleaning, flush away traces with water.
Major Spills	Clear area of personnel. Control personal contact by using protective equipment. Dampen product, if necessary, to avoid dissemination of the product. Prevent spillage from entering drains, sewers or water courses. Recover product wherever possible. Put residues in labelled plastic pails or other suitable sealed containers for disposal. If contamination of drains or waterways occurs, advise emergency services.

Personal Protective Equipment advice is contained in Section 8 of the SDS

EMERGENCY RESPONSE PLANNING GUIDELINES (AIHA 2015): No ERPGs have been set for this substance by the American Industrial Hygiene Association.
PROTECTIVE ACTION CRITERIA (PAC) – SCAPA, 2015: No PACs have been set for this substance.

SECTION 7 HANDLING AND STORAGE

PROCEDURE FOR HANDLING

Operators should be trained in procedures for safe use of this material. Limit all unnecessary personal contact. Wear protective clothing when risk of exposure occurs. Use in a well-ventilated area. Avoid contact with incompatible materials. When handling, do not eat, drink or smoke. Keep containers securely sealed when not in use. Avoid physical damage to containers. Always wash hands with soap and water after handling. Work clothes should be laundered separately. Use good occupational work practice. Observe manufacturer's storing and handling recommendations. Atmosphere should be regularly checked against established exposure standards to ensure safe working conditions are maintained.

SUITABLE PACKAGING: Original packaging. Check that packaging is clearly labelled.

STORAGE INCOMPATIBILITY: Segregate from oxidizing agents.

STORAGE REQUIREMENTS: Store in original packaging until ready for use. Keep containers securely sealed to protect from moisture. Store in a cool, well-ventilated area out of direct sunlight. Store away from incompatible materials and dangerous goods. Protect containers against physical damage and check regularly for leaks.

SECTION 8 EXPOSURE CONTROLS / PERSONAL PROTECTION

Exposure Controls	EXPOSURE CONTROLS Source Material Measurement Limit New Zealand WES 2020 total dust time weighted average (TWA) 10 mg/m ³ New Zealand WES 2020 respirable dust time weighted average (TWA) 3 mg/m ³ No exposure limits for Potassium Sorbate set by WorkSafe New Zealand or Safe Work Australia.
Engineering Controls	Ventilation System: A system of local and/or general exhaust is recommended to keep employee exposures as low as possible. Local exhaust ventilation is generally preferred because it can control the emissions of the contaminant at its source, preventing dispersion of it into the general work area. Refer to 'A simple guide to local exhaust ventilation' found on the WorkSafe New Zealand website.
Personal Protection Equipment (PPE)	PERSONAL RESPIRATORS: An approved dust mask e.g. a P1 respirator, is recommended when using this product in dusty conditions. For more information see Australian/New Zealand Standard, AS/NZS 1715:2009 and AS/NZS 1716:2012. If in doubt, seek expert occupational hygiene advice. SKIN PROTECTION: Wear impervious protective clothing, including boots, gloves, lab coat, apron or coveralls, as appropriate, to prevent skin contact. EYE PROTECTION: Use chemical safety goggles and/or a full face shield where splashing is possible. OTHER: Maintain eye wash fountain and quick-drench facilities in work area.

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SECTION 9 PHYSICAL AND CHEMICAL PROPERTIES

State	Solid	Autoignition Temp (°C)	>150
Molecular Weight	150.22 pure	Flash Point (°C)	Not available
Melting Range (°C)	210	Lower Explosive Limit (%)	Not an explosion hazard
Boiling Range (°C)	Not applicable	Upper Explosive Limit (%)	Not an explosion hazard
Solubility in water (g/L)	582	Decomposition Temp (°C)	Not available
pH (1% solution)	Not available	Viscosity	Not available
pH (as supplied)	8 - 11	Evaporation Rate	Not applicable
Bulk Density (g/cm ³)	0.670	Relative Density (g/cm ³ , 20°C)	1.36

SECTION 10 STABILITY AND REACTIVITY

Chemical stability	Product is stable under normal conditions of use, storage and temperature.
Conditions to avoid	Avoid excessive heat, direct sunlight, static discharges, moisture, and temperature extremes.
Incompatible materials	Incompatible with strong oxidizing agents, combustible materials, reducing agent and strong acids. Keep containers dry and tightly closed to avoid moisture absorption and contamination.
Hazardous decomposition	Thermal decomposition can lead to release of carbon oxides and potassium oxides.
Hazardous reaction	Hazardous polymerization will not occur.

SECTION 11 TOXICOLOGICAL INFORMATION

POTENTIAL ACUTE HEALTH EFFECTS: This product has low oral toxicity and causes serious eye irritation.

ACUTE HEALTH EFFECTS

SWALLOWED: Considered an unlikely route of entry in commercial/industrial environments. The solid/dust is of low toxicity if swallowed. Acute potassium poisoning after swallowing is rare, because vomiting usually occurs and renal excretion is fast. Potassium causes a slow, weak pulse, irregularities in heart rhythm, heart block and an eventual fall in blood pressure. Breathing initially becomes faster but the muscles of breathing eventually become paralysed. There can be loss of appetite, extreme thirst, increased volumes of urine, fever, convulsions and gastric disturbances; death may then occur due to failure of breathing and inflammation of the stomach and bowel.

EYE: Particulate/dust is slightly discomforting to the eyes.

SKIN: Not considered an irritant through normal use. Sorbic acid and its salts are weak sensitizers and have, occasionally, been implicated in causing contact urticaria.

INHALED: Particulate/dust is slightly discomforting to the upper respiratory tract.

CHRONIC HEALTH EFFECTS

Principal routes of exposure are usually by inhalation of generated dust and skin contact. As with any chemical product, contact with unprotected bare skin, inhalation of vapour, mist or dust in work place atmosphere, or ingestion in any form, should be avoided by observing good occupational work practice.

TOXICITY AND IRRITATION

TOXICITY

Acute Oral Toxicity, Rat, LD50: 4200 mg/kg [NZ EPA CCID]

Acute Dermal Toxicity, LD50: >2000 mg/kg.

Acute Inhalation Toxicity, LC50: No data.

IRRITATION

Eyes: Irritating. [NZ EPA CCID] Skin: May cause skin irritation.

Carcinogenic effects: Not classified or listed by IARC, NTP, OSHA, Ca Prop65 and ACGIH. Mutagenic effects: No genotoxicity potential either in vitro or in vivo.

Reproductive or developmental effects: Not available.

Aspiration hazard: Not available.

Specific target organ toxicity: Not available.

Sensitisation (respiratory/contact): No skin sensitisation was found in a guinea pig test (Directive 67/548/EEC). No reports of respiratory sensitisation found.

SAFETY DATA SHEET**SECTION 12 ECOLOGICAL INFORMATION**

ECOTOXICITY: No evidence of aquatic toxicity.

ECOTOXICITY DATA

Fish, 96h LC50: >1000 mg/L

Crustacean, (Daphnia magna), 48h EC50: 750 mg/L OECD Guideline 202 Algae 72 or 96h EC50: No data.

Lactobacillus sp. (Bacteria), 48h, EC0: >1600 mg/L

Persistence and Degradability: Readily biodegradable.

Mobility: Soluble in water.

Bioaccumulation: Bioaccumulation is considered negligible.

BOD and COD: No data.

Products of Biodegradation: No information available.

Toxicity of the Products of Biodegradation: No information available.

DO NOT discharge into sewer or waterways.

SECTION 13 DISPOSAL CONSIDERATION

PRODUCT: Recycle wherever possible. Special hazard may exist - specialist advice may be required.

The product may be treated so that it is no longer hazardous by a means other than dilution. This includes incineration at an approved site or burial in a landfill in such a manner that it will not lead to any adverse health effects to any person or exceed any TEL (tolerable exposure limit) set by the Authority for this substance.

Do not dispose with household rubbish. Treatment in a biological wastewater treatment system with prior approval and arrangement is also permissible providing that the substance is rendered non-hazardous and does not pose any adverse effects to human health or the environment. Alternatively consult an approved Waste Management company for disposal options. Do not dispose with household rubbish.

PACKAGING: Recycle wherever possible. Special hazard may exist - specialist advice may be required. Puncture containers to prevent re-use and bury at an authorised landfill. Empty containers may be decontaminated. The residual contents of the package must be diluted to below the thresholds for the respective hazard and the diluted residue is 1% or less of the volume of the package.

Alternatively, consult an approved Waste Management company for disposal options or dispose of at an approved waste disposal facility.

Observe all label safeguards until containers are cleaned and destroyed.

Where possible retain label warnings and SDS and observe all notices pertaining to the product. Must not be disposed of in household rubbish.

SECTION 14 TRANSPORT INFORMATION

NOT REGULATED FOR TRANSPORT OF DANGEROUS GOODS: UN, IATA, IMDG

Not classified as a Dangerous Good under NZS 5433:2007 Transport of Dangerous Goods on Land.

SECTION 15 REGULATORY INFORMATION

REGULATIONS: Classified as hazardous according to the criteria of the New Zealand Hazardous Substances and New Organisms Act.

EPA Approval Code: HSR002739

Hazard Classifications: 6.1E (oral), 6.4A

Transfer notice: 28 June 2006 Hazardous Substances (Dangerous Goods and Scheduled Toxic Substances) Transfer Notice 2006, New Zealand Gazette, 26 June 2006 – Issue No.72

Approved Handler, Tracking and Premises Test Certification requirements do not apply.

Potassium sorbate (CAS: 24634-61-5) is found on the following regulatory lists:

International Council of Chemical Associations (ICCA) - High Production Volume List.

Australia New Zealand Food Standards Code - Food Additives - Schedule 8 Food additive names and code numbers.

Australia New Zealand Food Standards Code - Food Additives – Schedule 15 Substances that may be used as food additives.

Potassium sorbate (CAS: 24634-61-5) is found on the following inventories:

NZIoC, AICS, DSL, TSCA.

SECTION 16 OTHER INFORMATION

The information contained in this Safety Data Sheet is obtained from current and reliable sources. Pure Ingredients Ltd provides the information contained herein in good faith but makes no representation as to its comprehensiveness or accuracy. This Safety Data Sheet summarises our best current knowledge of the health and safety hazard information of the product, but does not claim to be all inclusive. This document is intended only as a guide to the appropriate handling of this material.

Revision: 00 – 20/ 05/ 2020 Potassium Sorbate SA082 0721032017 New Issue.

Revision 01 – 04/07/2022 – minor updates.